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Central Intelligence Agency

Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

10 March 1988

China: Pressuring Japan Over Technology Transfer 25X1

Summary

During the last half of 1987, China reacted to tighter Japanese technology transfer controls with high-level protests and measures to redirect trade away from Japan. Japan's subsequent easing of export controls and other measures temporarily stilled Beijing's protests, but we believe Beijing's policies remain unchanged, reflecting deep-seated concern over Japanese technology transfer policy. Beijing's long-term strategy of reducing its technological dependence on Japan will continue to erode the Japanese market share of China's low-to-medium technology imports, although for at least the near-term Japan will probably remain a significant source of equipment and high-technology goods. China also will continue to seek advanced technology and training from Japan.

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This memorandum was prepared by Office of East Asian Analysis. Information available as of 9 March 1988 was used in its preparation. Comments and queries are welcome and may be directed to the Chief, Trade and Technology Branch, China Division, OEA,

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We believe Beijing will continue to press Japan to increase technology transfer. Sino-Japanese frictions over technology trade probably will not increase sales for US firms, however; European firms--often offering preferential financial terms--are the more likely beneficiaries.

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China's Complaints

Frictions in Sino-Japanese technology trade intensified in mid-1987 when Beijing publicly objected to stricter Japanese export controls, and to a one-year ban on exports from Toshiba Machine Tools to Communist countries because the company had illegally sold sensitive technology to the Soviet Union. Deng Xiaoping and other Chinese officials protested the restrictions, claiming they hurt China more than the Soviet Union. Charging that the Japanese were conspiring to deny technology to China, Beijing said it regarded the case as a crucial issue in Sino-Japanese relations. At the same time, anger because a Japanese court awarded Taiwan a dormitory also claimed by China,[1] and a Japanese politician's comment that Deng was out of touch with current realities in Sino-Japanese relations heightened Beijing's displeasure toward Tokyo.

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These irritants caused Beijing to strengthen efforts to redirect trade away from Japan in an attempt to pressure Tokyo. Beijing issued a national directive, probably in early June, to restrict imports from Japan, and to substitute either products from other countries or products made in China. A Guangdong provincial official told US Consulate officers that the policy specified downgrading Japanese participation in the strategic areas of electric power and telecommunications.

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Officials involved in technology acquisition quickly began to act on the policy:

- The Ministry of Foreign Economic Relations and Trade (MOFERT) ordered an end to machinery imports from Japan in early July.
- In August, petrochemical industry officials stated that Beijing's unhappiness with Japan over several issues was responsible for ending Japanese participation in building petrochemical plants.
- A vice manager of China's National Metallurgical Import and Export Corporation said China is reducing the amount of machine tools, as well as steel, purchased from Japan.
- A provincial official told a US Consulate General officer in September that none of the six Japanese companies bidding on a Guangdong pump storage project would be selected, regardless of the cost of their proposals, as a result of the new policy.

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- A Guangdong telecommunications official told US officials that although negotiations for the import of Japanese switching equipment had been completed, Beijing ordered Guangdong to cut the purchase in half.

- In October, Beijing announced it had chosen a consortium of US and European firms over two Japanese firms to provide equipment for Shanghai's Shidongkou power station. Mitsubishi and Hitachi had both aggressively sought the contract and were viewed by foreign observers as strong contenders.

The Japanese Response 25X1

Japan first sought to minimize bilateral strains over technology transfer by lessening the impact of the ban on Toshiba exports. After ordering Toshiba Machine Company to find other firms capable of fulfilling its contracts with China, the Ministry of International Trade and Industry (MITI) sent the Director General of its Trade Administration Bureau to Beijing in mid-October to discuss the Toshiba ban. He offered to either substitute other companies' goods, or have Toshiba pay a penalty and deliver the goods at the end of the ban; he also said Tokyo was seeking a way to partially lift the ban to allow some Toshiba exports to China. The Japanese official argued that the effect of the Toshiba case on transfers to China was a result of temporary bureaucratic shortcomings--too few export control officials overwhelmed by an increasing number of licensing requests--rather than a conscious attempt to restrict transfers to China. In December, MITI formally announced its decision to partially lift the Toshiba ban and later in the month authorized the first Toshiba shipment to China under the new rules.

Furthermore, in early November Japan excluded China from new, stricter amendments to its export control laws for technology sales to Communist countries. In discussions with US officials, a Japanese Foreign Ministry official said that, although China was exempt from the amendments, Tokyo would continue to monitor closely exports to China. He said "the fine print" explained how this worked, noting that China's exemption was a "political judgment made at the highest political levels." To further expedite licensing requests, in mid-December MITI added three items--silicon, infrared imaging cameras, and radio receivers--to the list of COCOM items for export to China that would be handled as administrative exceptions without referral to COCOM. 25X1

Although Beijing temporarily lowered its public posture on technology transfer following these moves and the change of leadership in Japan last October--Zhao Ziyang, Li Peng, and other leaders began stressing positive aspects of the relationship in public speeches--we believe Chinese policy remains unchanged. Beijing reportedly reissued its internal trade restrictions in late October, calling for purchases of goods from Europe and the United States, even if Japanese prices are lower, and specifying that all items requiring approval from a State Council Ministry would be denied if the supplier was Japan. there were further restrictions on contracts with Japan beginning in late November or early December, and US consulate officials and businessmen report that many Chinese officials involved in commercial negotiations continue to redirect imports from Japan. 25X1 25X1

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In late December, Beijing once again made its case public as the Chinese press published articles highlighting the harm suffered from the Toshiba ban, and several firms filed claims for damages. Since January, MOFERT officials have repeatedly said China was not satisfied with the Japanese plan to handle the disputed contracts and continued to demand compensation.

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Impact on Chinese Firms

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Japan's controls have delayed projects and limited Chinese access to Japanese technology. The one-year ban on all Toshiba Machine Tool exports to Communist countries froze 25 Chinese contracts worth between $12.5 and 17 million. The contracts involve both equipment and installation and maintenance services of Japanese technicians. According to Chinese press reports, the ban forced some Chinese factories to postpone or cancel production plans--entailing significant financial losses--and jeopardized air safety by preventing delivery of radar needed for air traffic control in several cities.

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Beijing claims that tighter Japanese export screening procedures have prevented companies other than Toshiba from fulfilling contracts with China worth more than $7 million--including equipment for high-priority projects. For example, a shipment of Japanese cellular phones needed for the All-China Games was delayed because of the tighter procedures, Japanese firms have blamed closer MITI scrutiny for other delays including deliveries of software needed to operate a radar in Chengdu, and machinery for a power plant in Dalian. According to some officials, the processing time for license applications has increased by up to six months.

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MITI pressure, including several ongoing investigations of possible export violations, is slowing sales and making Japanese firms more cautious in dealing with China. Chinese MOFERT officials report that Japanese requests for end-user certificates are increasing significantly because Japanese firms have begun applying for export licenses for equipment previously exported without one, just to be safe. Chinese firms, for example, complain that imports of medical instruments have required more time since Japanese firms have been seeking approval from export control authorities. Japanese controls have also prevented firms from offering other technology and equipment to China:

- In August, Sumitomo--at MITI's suggestion, --decided not to offer rare earth magnet technology to China, despite Chinese concessions, to avoid dealing with export controls for COCOM-restricted technology.

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- MITI refused to allow Hitachi to display special optical fibers at a Beijing exhibition in October 1987, and forced two other exhibitors to alter their equipment,

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- MITI reportedly has also prohibited Japanese firms from displaying their most advanced semiconductor production equipment at a show to be held in the spring of 1988. 25X1

Pressure To Continue

Even if the remaining Toshiba cases--the most obvious irritants in the technology transfer relationship--are resolved, we believe China will continue to press the Japanese government as well as Japanese firms to increase technology transfer. Beijing has long resented the reluctance of Japanese firms to transfer advanced technology to China, and some officials have charged that it is Japanese government policy to keep Chinese technology levels 10-15 years behind Japan. According to MOFERT statistics, only 18 percent of China's total contracts for production lines and know-how were with Japan in 1986, compared to 47 percent with European suppliers and 15 percent with the United States. Furthermore, 25X1 Japanese transfers of production lines and know-how dropped by 45 percent during the first half of 1987. Although China's efforts to find new technology suppliers contributed to the decline, Chinese officials will undoubtedly blame Japanese firms for their unwillingness to transfer technology. 25X1

The recent Japanese relaxation of export controls is unlikely to buy them much goodwill, as China's reissuance of guidance restricting Japanese imports in late October and December indicates. In its technology transfer relationship with the United States, for example, China has expressed polite appreciation for liberalized controls, reminded US officials that they are only giving China its due, and proceeded to press for more concessions. We believe Beijing is likely to be even more demanding of Japan. The relative advantages of doing business with Japan due to geographic proximity are countered by deep-seated traditional animosities, compounded by China's perception that Japan treats it badly regarding technology transfer. 25X1

In the aftermath of the Toshiba case, as well as the Silkworm missile controversy with the United States, China is likely to be even more sensitive about technology transfer, and more unwilling to suffer real or perceived discrimination from Japan. China probably will not hesitate to raise the technology transfer issue with Tokyo in the future if it becomes more aware of either repeated denials or delays of technology or if key items of technology are denied. For example, Beijing will closely monitor Japanese policies on access to supercomputers--Japanese firms reportedly are considering submitting an export license for sales to China. Similarly, Chinese pressure will increase prior to COCOM meetings, but we believe Japan is unlikely to make major concessions in response to additional Chinese pressure. Tokyo views most technology transfer decisions as a private sector matter, and in COCOM, has demonstrated that national security is its major concern. 25X1

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A Selective Policy of Trade Redirection

Beijing also will continue to redirect technology trade away from Japan, in our opinion, particularly in selected areas, as demonstrated in Beijing's policy to cut purchases of telecommunications and power plant equipment. China chose sectors in which Japanese companies have been very successful--indeed, Beijing was concerned about Tokyo's dominant market share--and had expectations of further success. Both are among China's development priorities for the Seventh Five-Year Plan (1986-90) and are slated for considerable investment. But the rising value of the yen and the availability of other suppliers allowed Beijing to use these areas to send Japan a message.

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Advanced Technological Know-how and Goods. Beijing has limited its efforts to redirect purchases, however, recognizing that in many cases Japan is the best, or only, supplier of high-priority technologies. Even during the heightened tensions of recent months, for example, Chinese officials continued to seek Japanese technology and purchases in many areas. Japan is the best source of technology for color television tubes--one of five top priorities for the electronics industry during the 1986-90 period--and in late 1986 and 1987 China awarded several major contracts for color television tube production to Japanese firms. In January 1988, China concluded an agreement with Hitachi for video tape recorder manufacturing equipment and technology, according to press reports. The Japanese share of China's purchases of high-technology goods[2] has remained fairly constant over the past few years at slightly more than one-fourth: sales to China of high-technology microelectronics goods have increased; sales of high-technology telecommunications products are on the upswing after a drop in 1985; sales of advanced machine tools and medicine and biologicals peaked in 1984 and have dropped somewhat since; sales of high-technology computer equipment, chemicals, microelectronics, and scientific and precision instruments have remained fairly steady[3] (see figures 1 and 2).

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China is also engaged in joint research projects with Japan in artificial intelligence and robotics research, and has expressed interest in working together in areas such as Stealth technology, biotechnology, and microelectronics. Chinese willingness to cooperate in high-priority areas such as these is unlikely to be affected by any chill in relations (see inset).

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[2] High-technology goods are defined as items in eight areas for which research and development expenditures tend to constitute a significant share of the final product costs. The eight categories are: telecommunications, ADP equipment, microelectronics, machine tools, aerospace, scientific and precision instruments, medicine and biologicals, and chemicals. Analysis of trade in high-technology goods is based on UN statistics; China's published trade data do not provide the level of detail needed to differentiate high technology from other technology goods. UN statistics include data from most major partners, but not the Soviet Bloc.

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[3] Japanese firms provide only a fraction of China's aerospace imports.

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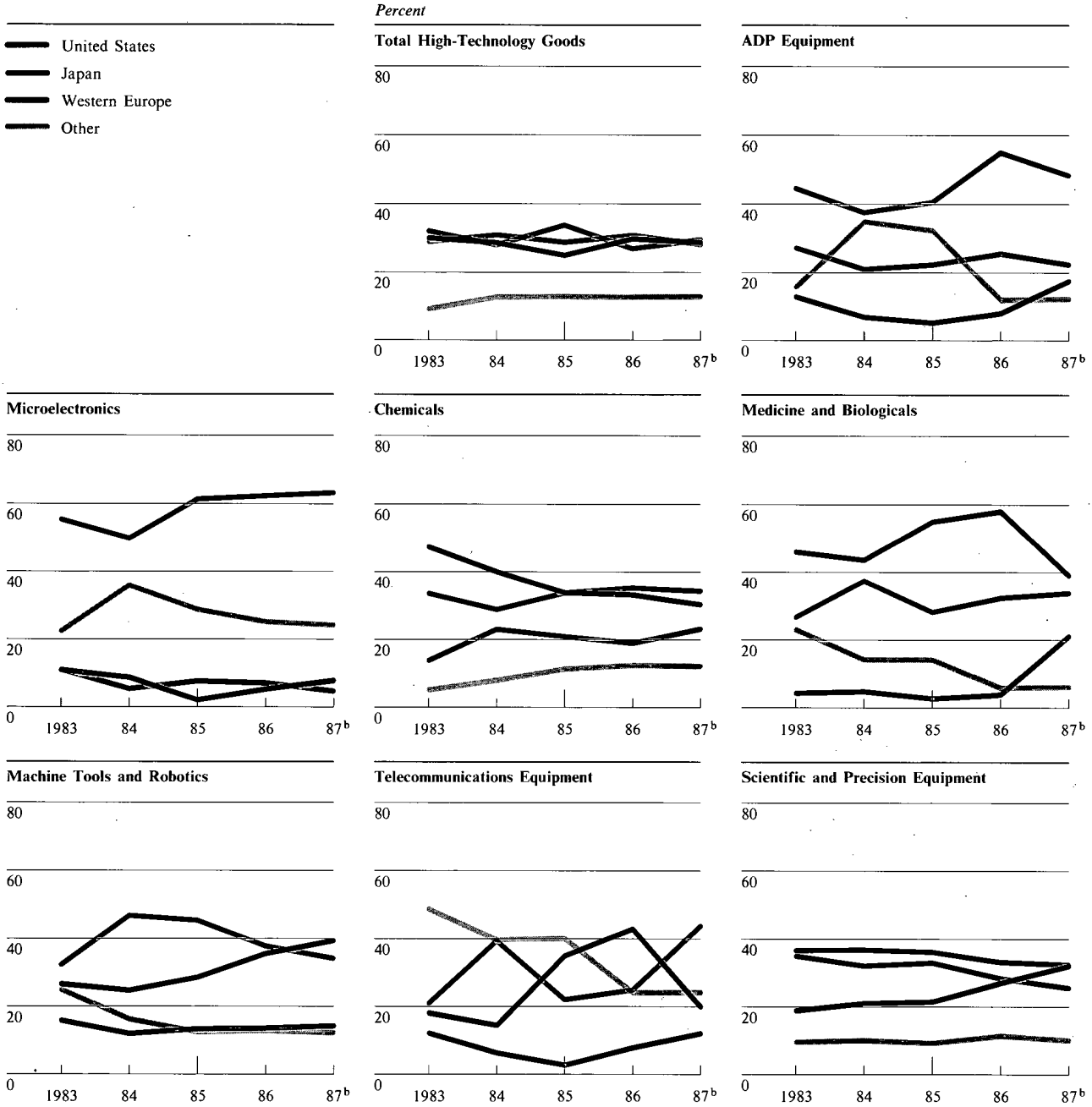
Figure 1
Chinese Imports of High-Technology Goods[a] – Market Shares of Selected Suppliers



[a] Includes microelectronics, computers, telecommunications, machine tools, aerospace equipment, scientific and precision instruments, medicine and biologicals, and chemicals.
[b] Estimated.
Source: UN statistics.

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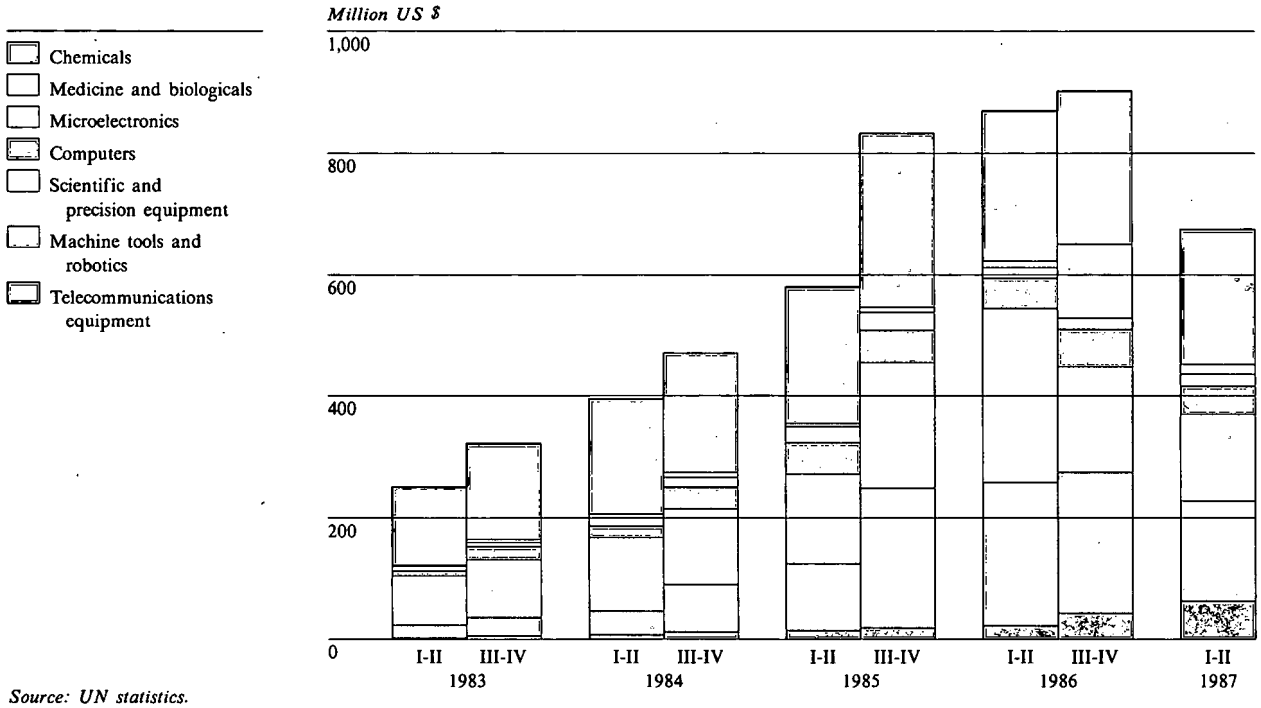
Figure 2
China: Value of High-Technology Goods Imported From Japan, 1983-87



Source: UN statistics.

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Sino-Japanese Cooperation in Research and Training

In addition to technology trade, China looks to Japan for cooperation in research and training for students and industrial workers. Chinese and Japanese scholars are conducting joint research and technological exchanges under governmental agreements and academic and industrial auspices. More than 7,000 Chinese students are also studying in Japan in 1987--up from fewer than 3,000 in 1985. In addition, each year thousands of Chinese receive technical training--ranging from several weeks to several months--through Japanese industry. Japan has established a management training center in China, and several Japanese ministries are supporting management training programs there. [redacted]

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Chinese officials are disappointed with the small number of joint projects and with overall funding levels. According to US Embassy reporting, China has frequently told Japanese officials that Japan's programs are smaller in terms of money and resources than Sino-US S&T cooperation. [redacted]

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Beijing is also worried about the exposure of its students in Japan to foreign philosophies. Chinese Embassy officials reportedly pay especially close attention to the activities of the China Spring group in Japan, and have warned students against participation in its activities. Chinese officials are reportedly concerned about a rise in incidents involving Chinese students who neglect their studies to work, or who have experienced difficulty adjusting to language and lifestyle differences. In Japan, the Chinese Embassy has promoted the establishment of student associations to help keep track of students, and Embassy officials have warned students that those who disobey orders will neither be given jobs upon their return home nor permitted to leave China again. Embassy personnel have also contacted the professors of students who are close to completing their studies to enlist their help in urging students to return home, reflecting Chinese concern over students who want to stay abroad. [redacted]

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Despite these concerns, cooperative research and training continued unabated in 1987; both countries seem willing to isolate research and training activities from disputes over technology transfer and other issues. China usually instructs its students to promote Sino-Japanese friendship and avoid involvement in political affairs. [redacted] Chinese officials have instructed students to raise the dormitory issue when they come into contact with Japanese students, suggesting China may now be more willing to involve students in disputes. Although we believe China is likely to allow cooperative research and training to proceed as usual, China may become more vocal about its concerns if, for example, Beijing perceives a large increase in the number of students who want to stay in Japan. [redacted]

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Medium- and Low-Technology Goods. Beijing can more easily find alternative suppliers for lower technology items, and Japan's share of China's overall technology imports has eroded over the past several years--mirroring trends in bilateral trade (see figure 3). Beijing had begun diversifying its suppliers of equipment and know-how as early as 1985 to reduce its trade imbalance and its technological dependence on the United States and Japan. China also strengthened demands that transfers of technology accompany purchases of consumer items and motor vehicles--most of which came from Japan. In early 1986, officials said that China intended to shift purchases of machine tools, consumer electronics, and automobiles from Japan, reportedly in response to Japanese unwillingness to transfer technology. Chinese efforts to redirect trade in 1987, coupled with the rising value of the yen and a temporary ban on new contracts, have further reduced imports of equipment and technology from Japan.[4] One prominent Chinese economist recently predicted that economic cooperation between China and Japan will continue to be slow until 1990.

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Yet even for goods embodying lower levels of technology, Japanese firms remain significant suppliers. For example, in 1987 Japan provided almost 50 percent of all Chinese telecommunications imports, even though its market share has dropped from about 75 percent in 1985, according to Chinese statistics.

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Established Links. In our view, other factors suggest Beijing will continue to view Japan as an acceptable supplier of know-how and certain technology goods. The strong Japanese presence in China--both in terms of installed equipment, and in the willingness of Japanese representatives to live and work in China for extended periods--continues to work in Japan's favor, particularly when equipment compatibility is a concern. In addition to the role of Japanese firms in Chinese telecommunications, for example, Hitachi has basically split the Chinese mainframe computer market with IBM, and Japanese firms are heavily involved in computer and software applications in China. Japan supplied about 30 percent of all Chinese imports of ADP equipment during the first three quarters of 1987, about the same as in 1986, according to Chinese Customs statistics.

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Moreover, several Japanese firms have served China by providing technology illegally, and we expect China to continue to exploit this channel. Finally, despite the directives curtailing trade with Japan, concessionary Japanese prices and financing are attractive. The further decentralization of import authority being discussed as part of trade reform could make it even more difficult for Beijing to enforce policies toward Japan. A Japanese press article, for example, reports that some Chinese companies have sought to avoid the ban on new contracts by requesting that such contracts be retroactive to November because they involve electronics parts and other commodities that must be imported from Japan.

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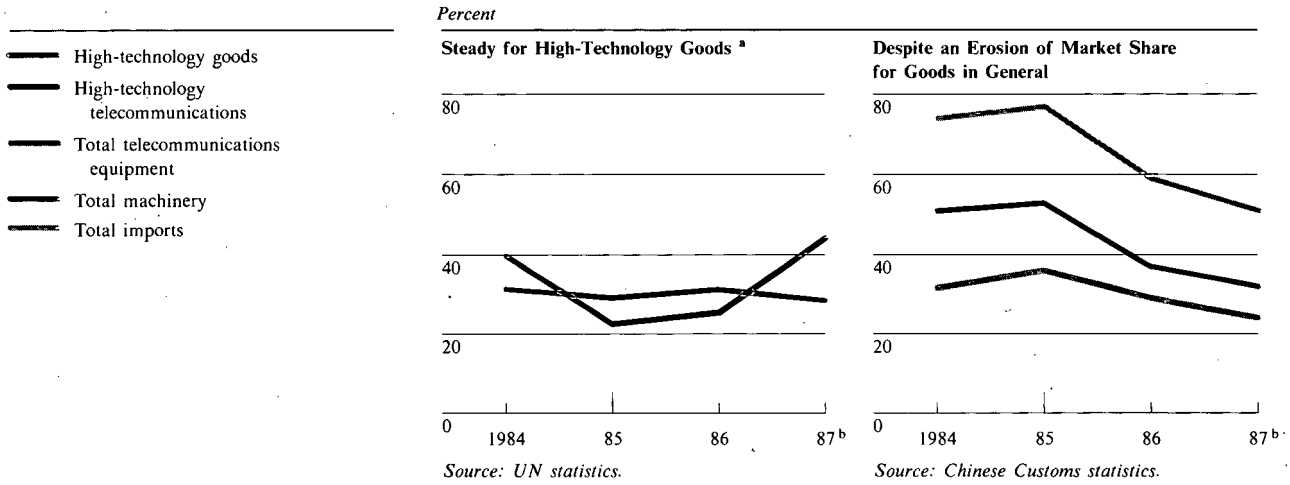
Figure 3
Japan's Share of China's Imports, 1984-87



Source: UN statistics.

Source: Chinese Customs statistics.

[a] Includes microelectronics, computers, telecommunications, machine tools, aerospace equipment, scientific and precision instruments, medicine and biologicals, and chemicals.
[b] Estimated.

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Implications for the United States

We believe US firms will see little increase in technology sales as a result of the current Sino-Japanese frictions. Although Chinese buyers regard US technology as first rate, Beijing's efforts to diversify sources of supply are causing Chinese firms to look elsewhere. West European firms may be more likely beneficiaries of China's shift away from Japan. Beijing looks for the best combination of price and technology, and European firms' preferential financing provides difficulties for US competitors.

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China is skilled at playing US and Japanese firms against one another in commercial negotiations, and in its governmental relationships. China is well aware of US-Japan bilateral discussions over technology transfer policy, both in general and regarding China. China has refrained from criticizing the United States for pressuring Japan to increase technology controls after the Toshiba diversion. If irritation with the United States over export issues such as the Silkworm missile case were to continue, however, China could step up criticism of the United States, or cancel selected purchases of US technology.

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